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ABSTRACT

The knowledge explosion dramatizes the need for education throughout peoples' lives, while technological change in particular fuels business, industry, and labor's imperative to cooperate closely with education to prepare people for work. In order to obtain the training, retraining, upgrading, and recycling of persons and skills, changes in work and life patterns, as well as incentive, will be needed. Numerous factors are altering the heretofore standard linear life pattern--factors such as inequitable work distribution among the population's three major age groups, a sense of job stagnation of underutilization, sex-role changes, and people's desire to pursue several educational or career tracks. Cyclic life patterns offer some relief from pressures and problems of linear life pattern inflexibility, while also helping to deal with various social problems simultaneously. Possible academic-business cooperation in this area might include work leaves for education and flexitime to permit part-time, extended education. Educational irstitutions, in turn, must assess their courses, scheduling, and all factors affecting the way they meet adult learners' needs: they must encourage diversity of teaching and learning styles. Community colleges will need to help persons progressing in or changing careers. Business-industry-labor conferences, such as the one held at the National Center for Research in Vocational Education in 1978, can also help states to increase input into staff development and lifelong education for work. (CP)

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BUSINESS-INDUSTRY-LABOR INVOLVEMENT IN LIFELONG VOCATIONAL-TECHNICAL EDUCATION

by

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> At the rate at which knowledge is growing, by the time the child born today graduates from college, the amount of knowledge in the world will be four times as great. By the time the same child is 50 years old, it will be 32 times as great, and 97% of everything known in the world will have been learned since the child was born.[1]

This startling statement by Robert Hillard of the Federal Communications Commission, quoted in The Futurist, dramatizes the need for the education of persons throughout their lives. With the rapid change in technology, and the change in educational pattern from the first quarter of life to one of lifelong learning, it becomes even more critical that business, industry, and labor cooperate closely with education toward their common goal of preparing persons for and in the work force.

The major thrust of industry's involvement with education has been in cooperating with schools in the preparation of entry level employees. With the shift in demographics (only 25 percent of the population is under age 16), and the rapid technological and sociological changes, educational institutions are called upon to serve adult learners throughout their life stages. Industry (meaning business, labor, government, agriculture, manufacturing) is finding it imperative to work with and call upon the services of education in training, retraining, upgrading and recycling present and potential employees. The pooling of talent, resources, and goals is necessary in assessing trends and future directions and then planning and preparing for that future.

Some further factors creating the need for lifelong learning include the following:

1. Job upgrading requires additional education.

2. Persons whose primary careers have been overturned by technological advances, or a flooding of the job market, or a dislike of their line of work, or a cutback of jobs in their field all need retraining.

3. Many--such as older persons and professionals--need to keep in touch with the changes taking place in society (whether technological, social, economic, or political).

It has been suggested that all these changes may even require that degrees and diplomas be renewed to have any meaning. A new form of credentialing is called for. A futurist has predicted that university degrees may expire automatically unless they are renewed after the degree-holder's abilities are checked.[2]

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1. William Abbott, "Work in the Year 2000," The Futurist, February 1977, p. 25.

2. Leland R. Kaiser, "Will Diplomas Need to Be Renewed?" The Futurist, April 1976, p. 112.

For employees to get the retraining they need for present or new jobs, a change in working patterns and incentives will be required. Workers' lives in the United States have traditionally been linear, that is, there has been a straight progression of education, work, and retirement. In this decade we have suddenly become aware that not only is this no longer functional, but that this pattern has changed and even greater changes are on the horizon.

Factors Altering the Linear Life Pattern

There are many factors forcing change from the linear life pattern (education, work, retirement). Following are some of these reasons:

1. There is a progressively inequitable distribution of work among the three major age groups of the population. The middle-aged group is monopolizing even more of the preferred jobs in society. This is pressuring older people to retire and younger people to defer even longer their entry into career-related work.

2. The age distribution in work and economic forces causing many workers to experience a sense of job stagnation and boredom. This is further contributed to by an underutilization of workers' skills and education.

    a. We see a gap between many workers' educational attainment and occupational advancement or opportunity. The developed skills and underdeveloped potentials within our population are considerably greater than the demands of our labor market.

    b. The oversupply of persons in the prime worker age group of 25 to 44 creates fierce competition to see who is able to move into the limited roster of managerial and skilled jobs at preferred rates of pay. The number of workers in that bracket will increase by fully a third in the 1980s.[3]

3. Women and students, who traditionally have not been workers, now want more work.

4. Prime-age full-time workers (two-thirds of whom are men) are working about as many hours per week as they did thirty years ago, and they indicate they would now like more free time.

5. Many retired or about-to-be retired workers would like to maintain some work-life, opting for part-time work.

    a. With improved health in old age and greater longevity, the desire is likely to be to work for more years, but for fewer hours per week. This would lead to gradual retirement.

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3. A. H. Raskin, "The Shape of Work to Come: Perils," Change, July-August 1979, p. 22.

6. Many adults of all ages are asking for additional varied educational opportunities.

7. Changes in sex roles and family structure are fostering more cyclic life patterns. The increasing sex-role flexibility today is expanding the opportunity for spouses to rotate roles and to allow for movement in and out of education, work, and leisure at various times in their lives.

8. Adults periodically reassess their values, directions, and life styles. This often results in changes in work and personal lives that break the traditional linear pattern.

9. Trends also indicate that travel and apprenticeship will become a part of the formal education of many persons. Most people will pursue several educational tracks and careers during their lives.

In Richard Bolles's new book, The Three Boxes of Life (education, work, leisure), he contends that these three aspects of life should and can be integrated and brought into better balance through careful planning. He provides information and guidance to help people do so. Bolles maintains that none of the three boxes prepares us for life's next stage and that we are better off integrating and shifting the balance as our needs change throughout life.

Cyclic Life Patterns

Barry Stern and Fred Best in their chapter on "Cyclic Life Patterns" in the book, Relating Work and Education, identify and advocate life patterns that allow for alternating education, work, and leisure throughout the life cycle. They term this "cyclic life patterns." They declare that "On the basis of demographic forces alone, the problems associated with the linear life plan are likely to worsen dramatically, with new problems abruptly taking their place around the year 2000. To deal with these problems, we may have to scrap linear lifetime patterns in favor of a more cyclic model."[4]

They further state, "One advantage of a policy that incorporates cyclic life patterns is that it can be structured to deal with a number of social problems simultaneously, particularly inadequate access to leisure and education throughout life and the need to ease the 'lockstep' progression from school to work to retirement. Achieving the goal of making work more accessible, while making education and leisure more accessible as well, merits high priority on the nation's policy research agenda."[5]

This cyclic life pattern is forcing changes in both the workplace and education. There is a need for academic-business cooperation in continuing education. Possible areas of cooperation involve (1) work leaves for employees interested in resuming education later in their lives, reasoning that the employer will benefit from better informed, more highly stimulated employees; and (2) work hours structured so as to allow for part-time extended education.

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4. Barry Stern and Fred Best, "Cyclic Life Patterns," Relating Work and Education, p. 257.

5. Ibid., p. 267.

Flexitime is gaining popularity today. This is a system whereby employees have a certain core of time when all are present, but have the flexibility to select the particular hours that best fit their life styles and responsibilities. They may choose to come in early and leave early, work traditional hours, or come in later and stay later. Each employee would have a regular schedule of his own choosing that was also appropriate for his job role. In addition to flexitime, there is a need for flexiday, fleximonth, and flexiyear to enable workers to continue their education and upgrade and update their competencies.

This also opens up the possibility of more employment and for job sharing. Persons, particularly women and older persons, would benefit from the opportunity to share a job, i.e., to split the time required to fill a position.

Some benefits to organizations (industries) of more cyclic life patterns are (1) extended nonwork time may allow for both self-renewal and retraining of employees; (2) worker morale and productivity may improve; (3) nonproductive workers may find new and more suitable jobs to the benefit of themselves and their old employers; and (4) tax burdens for unemployment and welfare services may be lowered.

Educational Response

Educational institutions are in the throes of responding to the emerging cyclic life patterns and need of persons for lifelong education. All educational institutions serving adults should assess their scheduling, course offerings, and methods of teaching to see if they meet the needs of and are appropriate for adult learners. Courses should be offered at the times and places that adults can take them. This points toward active evening and weekend schedules and new configurations of blocks of time beyond the regular class schedules in the eleven-week quarter or eighteen-week semester. It means taking the courses where the people are: to places of employment, to neighborhood libraries and schools, and to the marketplace.

Courses should be assessed to ascertain relevancy, current technology, new knowledge, and appropriate level of content. The teaching methods and procedures must take into account the life experiences of adults. The experiences and knowledge of adults can contribute much to the classroom. The adult should be able to build from the foundation of knowledge or skill he/she already has, and not waste time repeating this in courses. The teacher of adults should be aware of the students' past educational experiences and how threatening returning to the classroom can be to many adults.

The great diversity of adults to be served has brought about a recognition that different individuals learn best under varying methods and time frames. Various educational innovations have responded to meet this need. Some of these educational practices are student-initiated courses, nongraded studies, contract grading, academic credit for prior learning, academic credit for work experience, vouchers and learning contracts, satellite campuses, ethnic curriculums, programs for older persons, colleges without walls, and equivalency examinations.

Education in Industry

While in Europe labor contracts often provide for paid educational leaves or for full-time training, employer-sponsored education in the United States is usually provided by the company on site during working hours or by providing tuition for off-site education after working hours. Three-quarters of industrial firms provide such education.[6]

Workers in industries that experience continual technological development have the greatest opportunity to receive education to upgrade and keep their skills current. Thus, it appears that participation by adults in part-time educational activities is as likely to result from the kind of work that one does as it is to lead to such work.[7]

The American Society for Training and Development estimates that private companies and government agencies have been spending upward of twenty billion dollars a year, primarily on in-house education but including at least one billion dollars on college tuition aid.

Most employer-sponsored education stems from business needs, but in the process supports the job and career aspirations of participating employees. The major proportion of a company's employee development resources are intended to prepare employees for new responsibilities, to improve their present performance, and to maintain their competency in the face of changing knowledge, products, and technology.

Education off-site after hours is usually part of a tuition aid program under which employees are reimbursed for all or part of the costs of courses that they elect to take. Such courses usually must be related to their jobs or careers.

Lifelong Learning in the Two-Year College

The segment of education in our society that has as its mission the diverse educational needs of adults in the community is the two-year college. Community, junior, and technical colleges have been directing their resources to serve students, both traditional and nontraditional, in a wide range of programs. Part of their services is to provide courses, both credit and non-credit, on site in industry as well as their regular classes on campus.

Edmund J. Gleazer, President of the American Association of Community and Junior Colleges, says that education must be concurrent if it is to relate to the learning needs generated by the tasks of each developmental stage of life.

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6. Stanley D. Nollen, "The Current State of Recurrent Education," Relating Work and Education, p. 75.

7. Stern and Best, p. 254.

He sees studentship as concurrent with the maintenance of work and citizenship roles and family responsibilities. He states, "Nowhere is this more apparent than in the community college. Sixty-percent of our students, adults, are employed; a large proportion have full-time jobs. There are also as many non-credit students. . . . The community college increasingly will need to provide resources for persons progressing in a career, re-examining work, changing careers, preparing for retirement, expanding avocational interests, searching for new achievement outlets, and disengaging from paid work."[8]

This view is supported and expanded by the college entrance examination board in its publication Future Directions for a Learning Society when it states that 40 million adult Americans are in career transition, and that the majority of them expect to return to some form of education or training. They recommend more collaboration between and among all classes of providers--postsecondary education institutions, businesses, industrial organizations, cultural agencies, and the mass media.[9]

B-I-L Conference at the National Center for Research in Vocational Education

A conference held at the National Center for Research in Vocational Education last year dealt with involving business, industry, and labor in vocational education staff development programs--an important form of continuing education. Faculty renewal is an ongoing process, and teachers have long been involved in the process of lifelong learning--their own as well as for others. At that conference we looked at the role and responsibility of industry in the professional development of vocational educators. We also looked at using community-wide collaborative councils in this process, and how to work effectively with the community power structure. Two other areas we pursued were how to meaningfully involve labor in vocational education staff development, and how to effectively use advisory committees toward this end.[10]

The participants were teams of three persons from ten states. Each state team shared with us what activities and practices there were in their states for involving industry in the professional development of teachers. Then, the thrust of the conference was to provide the technical assistance to enable each state team to develop a plan of action for their state to increase input from business, industry, and labor in vocational education staff development. I am pleased to report that these states had a good foundation of activities from which to move and created productive plans for furthering those endeavors.

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8. Edmund J. Gleazer, Jr., "Eduation for Teachable Moments," Community and Junior College Journal, May 1978, pp. 16-17.

9. Future Directions for a Learning Society, College Entrance Examination Board (New York 1978), pp. 10-11.

10. Catharine Warmbrod, et al., Business-Industry-Labor Input in Vocational Education Personnel Development: Technical Assistance Conference Proceedings. (Columbus, Ohio: The National Center for Research in Vocational Education, 1978).

The activities, both present and planned, included industry-education councils, advisory committees, cooperative education programs, joint development of instructional materials, supporting of vocational student organization, quick-start programs, joint curriculum development, computerized vocational information programs, classroom resource persons, community resources workshops, internship programs for vocational teachers, evaluation activities, personnel exchange programs between education and industry, and on and on and on.[11]

These things become particularly important as we look at the role of technical educators in providing lifelong education for future and present workers.

Conclusion

I would like to close with a charge to both education and industry to expand their working together to actively include the great new need and educational emphasis--that of lifelong education. Technological, sociological, and demographic changes underscore the urgency and need. The beneficiaries are the students, industry, and society. The students are present and aspiring workers; industry refers to business, labor, government, agriculture, and manufacturing; and society encompasses all of us. The opportunity is now to shape and impact upon the future.

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11. Catharine Warmbrod, et al., Business-Industry-Labor Input in Vocational Education Personnel Development: Technical Assistance Handbook. (Columbus, Ohio: The National Center for Research in Vocational Education, 1978).

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